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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,807	11/21/2002	Shigefumi Odaohhara	JP920010333U	7978

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LENOVO (US) IP Law  
1009 Think Place  
Building One, 4th Floor 4B6  
Morrisville, NC 27560

EXAMINER
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BOATENG, ALEXIS ASIEDUA

ART UNIT	PAPER NUMBER
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2838

MAIL DATE	DELIVERY MODE
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11/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/065,807

Applicant(s)

ODAOHHARA, SHIGEFUMI

Examiner

Alexis Boateng

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4,16,22,23 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,16,22,23 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai (U.S. 5,982,153) in view of Turner (U.S. 2003/0169022).

**Regarding claims 1**, Nagai discloses wherein an apparatus comprising:

a battery which supplies power to the computer through a line by discharging after being charged (figure 2 item 5);

a capacitor connected to a the power line in parallel with the battery (figure 7 item C1);

a switch for disconnecting the high capacity capacitor and said series combination of said switch and said high capacity being coupled in parallel with said battery and said computer such that said battery, said computer and said series combination share two common connections (figure 7 item SW3); and

a controller for controlling operations of the switch, the controller configured to disconnect the high capacity from the power line using said switch when the battery is disconnected from the power line, when the computer is powered off or when the computer kept in a small-power consumption mode

(figure 2 item 12; column 3 line 17 – 59; column 4 lines 23 – 45: charging is stopped by the charger based of the detected charged state). Nagai does not expressly disclose a computer, but discloses a secondary battery (column 1 lines 9 - 14) system which may be used for a computer. Turner discloses a system which is used for a computer [0043]. Nagai also discloses a capacitor, but does not disclose a high capacity capacitor. Turner discloses in paragraph [0044] wherein a supercapacitor is used in parallel with the battery. Also, Turner discloses in figure 4 wherein the battery and load (computer) share two common nodes. It would have been obvious at the time of invention, to modify the Nagai system with the Turner system because, the structure of the Nagai system is very similar to circuit of the applicants and it only takes one of ordinary skill in the art to have a high capacity capacitor so as to provide charge to a large load such as a computer.

**Regarding claim 4,** Nagai discloses wherein the capacitor and the switch are integrated so that they can be set to the computer (column 1 lines 10 – 25: system is used for many electronic apparatus including computers). Nagai discloses the invention as previously claimed, but does not disclose a high capacity capacitor nor wherein they can be set to the computer. Nagai discloses wherein the system is set to the rechargeable battery, which may be connected to a device. Turner discloses in paragraph [0044] wherein a supercapacitor is used in parallel with the battery. Also, Turner discloses in figure 4 wherein the battery and load (computer) share two common nodes. It would have been

obvious to a person of ordinary skill in the art to modify the Nagai system with the Turner system so that it may be used in other larger applications.

**Regarding claims 22**, Nagai discloses wherein an apparatus comprising:

- a cell for supplying power through a predetermined line (figure 2 item 5);

- a capacitor connected to a the power line in parallel with the battery (figure 7 item C1);

- a switch for disconnecting the high capacity capacitor and said series combination of said switch and said high capacity being coupled in parallel with said battery and said computer such that said cell, the computer, and said series combination share two common connections (figure 7 item SW3); and

- a CPU for controlling the operations of the switch (figure 2 item 12);

- a CPU detects the state in which the cell is not connected to the computer or a state in which it is unnecessary to supply a peak power to the computer when the cell is set to the computer and controls operations of the switch based on a detected state (figure 2 item 12; column 3 line 17 – 59; column 4 lines 23 – 45: charging is stopped by the charger based of the detected charged state).

Nagai discloses the claimed invention, but does not disclose wherein the high capacity capacitor having an equivalent series in the range of ten to one hundred milliwatts and a capacitance in the range of zero point one to ten Farads. Nagai discloses in column 3 lines 5 – 30 and wherein a capacitance is used. It would have been obvious to one having ordinary skill in the art at the time of invention was made to provide a range of values for the resistance and capacitance such

as 10 – 100mW and 0.1-10F respectively. Since it has been held that there where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Nagai does not expressly disclose a computer, but discloses a secondary battery (column 1 lines 9 - 14) system which may be used for a computer. Turner discloses a system which is used for a computer [0043]. Nagai also discloses a capacitor, but does not disclose a high capacity capacitor. Turner discloses in paragraph [0044] wherein a supercapacitor is used in parallel with the battery. Also, Turner discloses in figure 4 wherein the battery and load (computer) share two common nodes. It would have been obvious at the time of invention, to modify the Nagai system with the Turner system because, the structure of the Nagai system is very similar to circuit of the applicants and it only takes one of ordinary skill in the art to have a high capacity capacitor so as to provide charge to a large load such as a computer.

3. Claim 16, 23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai (U.S. 5,982,153) in view of Turner (U.S. 2003/0169022) and in view of Hayashi (U.S. 2002/0026594).

**Regarding claim 16,** Nagai discloses wherein an intelligent battery set to a computer to supply power to the computer by discharging after being charged, comprising: cell for supplying power through a predetermined power line (figure 2 item 5); a high capacity capacitor connected to the power line in parallel with the cell under a predetermined condition (figure 7 item C1); a switch for

disconnecting or connecting the high capacity capacitor from or to the power line by a circuit, said switch series combination with said high capacity capacitor and said series combination of said switch and said high capacity capacitor being coupled in parallel with cell and the computer such that said cell, the computer, and said series combination share two common connections (figure 7 item SW3); a CPU for controlling operation of the switch (figure 2 item 12). Nagai does not expressly disclose a computer, but discloses a secondary battery (column 1 lines 9 - 14) system which may be used for a computer. Turner discloses a system which is used for a computer [0043]. Nagai also discloses a capacitor, but does not disclose a high capacity capacitor. Turner discloses in paragraph [0044] wherein a supercapacitor is used in parallel with the battery. Also, Turner discloses in figure 4 wherein the battery and load (computer) share two common nodes. It would have been obvious at the time of invention, to modify the Nagai system with the Turner system because, the structure of the Nagai system is very similar to circuit of the applicants and it only takes one of ordinary skill in the art to have a high capacity capacitor so as to provide charge to a large load such as a computer. Nagai and Turner disclose the invention as previously claimed, but do not disclose the remainder. Hayashi discloses in paragraphs [0113] – [0122] wherein the capacitor is disconnected with the computer enters a wake on LAN mode. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Nagai system with the Hayashi system so that computer charged with excess current.

**Regarding claim 23**, Nagai discloses a battery, which supplies power to the computer through a power line by discharging after being charged (figure 2 item 5); a switch (figure 2 item SW1); a high capacity capacitor coupled in series with said switch to the power line, the series combination of said switch and said high capacity being coupled in parallel with the battery such that the battery, the notebook computer, and the series combination share two common connections (figure 2 item C2); wherein the switch couples and decouples said high capacity from and to the power line (figure 2 item SW1), and a controller for controlling operation of the switch and which acts to conditionally decouple the high – capacity capacitor from the power line, when the computer is powered off, or when the notebook computer is kept in a small power consumption mode (figure 2 item 12; column 3 line 17 – 59; column 4 lines 23 – 45: charging is stopped by the charger based on the detected charged state). Nagai does not expressly disclose a computer, but discloses a secondary battery (column 1 lines 9 - 14) system which may be used for a computer. Turner discloses a system which is used for a computer [0043]. Nagai also discloses a capacitor, but does not disclose a high capacity capacitor. Turner discloses in paragraph [0044] wherein a supercapacitor is used in parallel with the battery. Also, Turner discloses in figure 4 wherein the battery and load (computer) share two common nodes. It would have been obvious at the time of invention, to modify the Nagai system with the Turner system because, the structure of the Nagai system is very similar to circuit of the applicants and it only takes one of ordinary skill in the art to have



a high capacity capacitor so as to provide charge to a large load such as a computer. Nagai and Turner disclose the invention as claimed, but do not disclose the remainder. Hayashi discloses in figure 1 wherein item 1, is a notebook computer. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Nagai system with the Hayashi system so that charging can be regulated in a notebook computer.

**Regarding claim 26,** Nagai discloses wherein the high capacity capacitor and the switch are integrated so that they can be set to the computer (column 1 lines 10 – 25: system is used for many electronic apparatus including mobile computers). Nagai does not expressly disclose a computer, but discloses a secondary battery (column 1 lines 9 - 14) system which may be used for a computer. Turner discloses a system which is used for a computer [0043]. Nagai also discloses a capacitor, but does not disclose a high capacity capacitor. Turner discloses in paragraph [0044] wherein a supercapacitor is used in parallel with the battery. Also, Turner discloses in figure 4 wherein the battery and load (computer) share two common nodes. It would have been obvious at the time of invention, to modify the Nagai system with the Turner system because, the structure of the Nagai system is very similar to circuit of the applicants and it only takes one of ordinary skill in the art to have a high capacity capacitor so as to provide charge to a large load such as a computer. Nagai and Turner disclose the invention as claimed, but do not disclose the remainder. At the time of invention, it would have been obvious to a person of ordinary skill in the art to

modify the Nagai system with the Hayashi system so that the notebook computer is not damaged by overcharging.

### ***Response to Arguments***

4. Applicant's arguments, see Appeal Brief, filed 7/09/07 with respect to the rejection(s) of claim(s) 1, 4, 16, 22, 23, and 26 under Nagai (U.S. 5,982,153) and Nagai (U.S. 5,982,153) in view of Hayashi (U.S. 2002/0026594) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nagai (U.S. 5,982,153) in view of Turner (U.S. 2003/0169022) and in view of Hayashi (U.S. 2002/0026594).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ullah Akm can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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AB

  
**BAO Q. VU**  
**PRIMARY EXAMINER**